

ON FOUR NEW SMALL MAMMALS FROM MANCHURIA

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Through the kindness of Mr. Kikuo Kurauchi of the Hygienic Institute, South Manchurian Railway Company, I have recently secured nine species of Muridae collected at Cheng-chia-tun (鄭家屯), Central Manchuria, bordering on Eastern Mongolia. Mr. R. W. Skvortzov of Harbin (哈爾濱) also kindly sent me seven species collected near there.

Upon examination of the above specimens I found four new species, which will be described in the present paper.

Meriones kurauchii sp. nov.

Type.—Adult male (skin and skull). Collected at Cheng-chia-tun, Central Manchuria, October, 1928.

Diagnosis.—This species resembles *M. unguiculatus* (A. M. Edwards) of Mongolia, but differs from it in having smaller size, longer ears, upper parts mixed with blackish brown hairs, and unusually developed whiskers, which reach beyond the shoulders. It differs from *M. auceps* Thomas of North China by its smaller size, blackish brown ears and claws, yellowish white hands and feet, and smaller bullae; from *M. psammophilus* (A. M. Edwards) by longer tail and blackish brown claws.

Color.—Upper parts and cheeks olive yellow of Ridgway; throat, breast and ventral side pure white, but some with a little gray at their bases; tail olive yellow throughout, the above and extremity more blackish brown; ears blackish brown edged with whitish margin; hands and feet yellowish white; claws blackish brown.

Skull.—It differs from *M. unguiculatus* by shorter and narrower rostrum, less spreading anterior zygomatic root, strongly curved upper profile, and shorter palatal foramina, and its general form

does not differ appreciably from that of *M. psammophilus* as described and figured by A. M. Edwards.¹ Auditory bullae rather small and prominent. Teeth with the usual *Meriones* pattern.

Dimensions of three specimens in formalin.

	Head and body	Tail	Hind foot	Ear
♂ type	90 mm.	95	28.5	15
♂	85	95	26	13.5
♂	73	77	24.5	12.5

Skull of type.—Greatest length 33.5 mm.; condylobasal length 30.5; zygomatic breadth 19.5; tympanic breadth 18.5; nasals 13.8; interorbital constriction 6.2; palatilar length 15; diastema 8; greatest horizontal diameter of bullae 12.5; palatal foramina 5.7; depth at anterior edge of alveolus of first molar 9; occipital depth 9; upper tooth series 5.

Phodopus praedilectus sp. nov.

Type.—Young adult male (skin and skull). Collected at Chengchia-tun, Central Manchuria, October, 1928.

Diagnosis.—Like *P. bedfordiae* Thomas, from Shen-si, North China, in general form and color, but differs by smaller size and shorter tail. It differs from *P. campbell* Thomas, Inner Mongolia, by its considerably different coloration.

Color.—Upper parts drab gray, slaty basally, becoming on the flanks and posterior back more distinctly drab; under parts, lateral sides, all four limbs and tail pure snowy white, the line of demarcation, which runs from just below the eyes to the top of the base of the tail, well defined, convex upwards at the shoulders and hips, downwards on the flanks. A prominent white patch over each eye. Ears anterior half of outside drab gray, posterior half of outside and whole inside white. Palms and soles with densely white hairs except for a naked patch at the base of the pollex.

Skull.—Smaller in all dimensions than that of *P. bedfordiae*, but the brain case proportionally large and rounded, and the bullae very small.

Dimensions of four specimens in alcohol.

¹ Rech., Mamm. Pl. X, p. 144.

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	Head and body	Tail	Hind foot	Ear
♂ type	54 mm.	8	10.5	12
♂	54	7	10.5	12
♂	53	7	10.5	12
♀	60	9	11	13

Skull of type.—Greatest length 20 mm.; basilar length 16; condylobasal length 18.5; zygomatic breadth 11.5; nasals 6.5; interorbital constriction 3.6; breadth of brain case 11; palatilar length 8.8; diastema 5.7; palatal foramina 3.2; upper molar series 3.3.

Cricetulus manchuricus sp. nov.

Type.—Adult male (skin and skull). Collected at Harbin, North Manchuria, December, 1926.

Diagnosis.—Size much smaller and color much darker throughout than *C. fumatus* Thomas, found in Central and Northern Manchuria. Black dorsal line rather distinct, from crown of head to upper surface of tail.

Color.—Upper parts dark grayish brown, grayish basally, under parts slaty gray, the tips of hairs gray no. 7, not sharply defined laterally. Black dorsal median line rather distinct. Ears blackish, with sharply contrasted white tip and edges. Hands and feet white; palms naked; soles hairy except in the region of the pads and on the undersides of the toes. Tail color above like the back and below white.

Skull.—Smaller in all dimensions than that of *C. fumatus*.

Dimensions of six specimens in formalin.

	Head and body	Tail	Hind foot	Ear
♂ type	65 mm.	24	16	13
♂	64	25	16	13
♂	64	23	15	13
♂	64	23	14.5	13
♂	62	22	14	12.5
♀	64	23	14.5	12.5

Skull of type.—Greatest length 23 mm.; zygomatic breadth 12.5; interorbital constriction 4; breadth of brain case 11.2; occipital

breadth 9.5; nasals 8; diastema 6.5; depth at anterior edge of alveolus of first molar 6.2; upper tooth series 3.7.

Microtus dolichocephalus sp. nov.

Type.—Adult male (skin and skull). Collected at Cheng-chia-tun, Central Manchuria, October, 1928.

Diagnosis.—Size and skull about as in *M. (Stenocranius) warringtoni* Miller from Eastern Mongolia, but differs by longer tail, different coloration and narrower skull. It differs by considerably smaller size from *M. pelliceus* Thomas from Manchuria.

Color.—Upper parts hair brown of Ridgway; under parts deep gull gray; cheeks, inner surface of ears and feet whitish; tail hair brown, below paler than above.

Skull and teeth.—In general form the skull differs from that of *M. warringtoni* in its narrower, less angular brain case, and longer rostrum. Auditory bullae rather small and narrow, and their form much more as in *M. mandarinus* than as in *M. warringtoni*. Interorbital region broad and rather inflated, with two low ridges.

Palate normal, with two considerable lateral pits. Teeth with the usual *Phaiomys* pattern; first molar with 5 closed triangles.

Dimensions.—Head and body 108 mm.; tail 42; hind foot 20; ear 11.5.

Skull.—Condylbasal length 28 mm.; zygomatic breadth 15; interorbital constriction 4; occipital depth 7.5; nasals 7.8; diastema 9.2; depth at anterior edge of alveolus of first molar 8.5; upper tooth series 7.2.